Network Guide

CMS

Network Guide

Network Guide

CONTENTS

SP2106 rev D

cms_network_installation_guide_cms-version_sp2106.indd   3   10/06/09   12.59

Network Guide

CMS

Introduction

The Competence Management System—from here on referred to as the CMS—is a centralized way for an instructor to manage and keep track of his students.

You can install the Competence Management System on your own server, or you can have Laerdal host it for you. It does not make any difference from the client's perspective.
See http://www.laerdal-sophus.dk for more info.

Installation of CMS

Requirements

The hardware requirements for the CMS server depend on how many clients and users will be logged onto the server at the same time. But as a general rule you can go by these requirements.

Hardware
    CPU: 1.6 GHz P4 or equivalent
    RAM: 512 MB (Depending on the host OS)
    HD: 5 GB
Software:
    OS: WinXP SP2+
        Win2003
        Win2008
    IE 5.5+ or Firefox 1.5+
User rights:
    You must have administrator rights on the server while installing
    the CMS
Internet Access:
    You must have Internet access in order to install the CMS. This
    ensures that you get the latest version of the CMS. If this is not pos-
    sible on the server you are installing CMS on then you should visit
    www.laerdal-sophus.dk on a different PC and download the latest
    configuration file.

Requirements for Active Directory integration

You can select to use your company's existing Active Directory user database.
The requirements are:

- An existing Active Directory 2003 or 2008
- A user in Active Directory with login "cmsadmin"
- Connecting to a larger Active Directory (eg. 1000+ users) increases the load. In this case we recommend doubling the minimum requirements.

Installation in detail

It is a good idea to visit www.laerdal-sophus.dk for the latest news, updates and FAQ before beginning the CMS installation.

What is installed

The main CMS installs several components which are needed to run the server

- o Java JDK 6 binaries
- o JBoss (runs as a service)
- o OpenLDAP (runs as a service)

In addition, the CMS Course Administration module will install

- o Apache web server (runs as a service)
- o MySQL (runs as a service)
- o Mongrel (runs as a service)
- o Ruby
- o Ruby on rails

Hints

- The installer may open more than one window. This is because some components have their own installer. You must allow each installation to finish, and you should not close any open windows.
- If you are installing on Windows XP or later you might get a pop up telling you that your security settings has been temporarily disabled. This is normal and they will be reset after the installation.
- If you do not have Java SDK installed you will be asked to install it. You may be asked to restart the computer once this task is completed; postpone the restart until after the installation has completed.

Step by step: Installation of the main CMS component

1. Inser t CD and star t the installation with Setup.exe.

2. The region selection determines what region settings the CMS will use for MicroSim.

3. The installer uses a configuration file. This can be obtained automatically from the Internet (preferred as it will ensure that the latest version is used) or from the local machine. The latter option should only be used in cases where you do not have access to the Internet when installing.
   a. If you choose the Internet option then the latest version will be downloaded from Laerdal and installation will proceed
   b. If you choose to install the configuration file from the local machine you must first obtain the configuration file. This can be downloaded from http://www.laerdal-sophus.dk

4. Choose the destination folder.

5. You must now select whether you want to use the built in OpenLDAP user database which installs automatically, or if you want to use an Active Directory existing on your network. See the Active Directory information in the section "Technical Administration of CMS" below for more informa-tion.

6. Email settings:

   You must fill in your SMTP mail server information. The mail server is needed by the Reminder functionality and the Course administration sys-tem. If you select to not configure a SMTP server then the email function-ality will be disabled

7. CMS Server settings:
   a. In the server setting step you must fill in the email address of the person who should appear as sender of all emails. The default email address provided can be used if you do not want users to be able to reply.
   b. License server password is required to be able to integrate the License server with the CMS. If you are using the CMS together with the Laerdal Resusci Anne Skills Station program then you also need to configure this password in the Laerdal License Server. You do not need to configure the License Server if you are only using MicroSim or Virtual IV.
   c. The system's services bind to several local ports and we recom-mend leaving the default port settings unless your site has special needs.

8. The installer will complete the setup and provide the URLs for the ap-plication. Please test these out and see if they come up properly. If you experience problems, then consult the FAQ below.

Network Guide

Running and accessing the CMS

The main CMS runs automatically in the background as two services
- o JBoss
- o OpenLDAP

The Course Administration module runs as 5 services by default
- o Apache web server
- o MySQL
- o Mongrel (3 services by default depending on the amount of ports assigned)

To access the CMS from the server; go to the start menu and click on the shortcut "Log On to CMS". It will open Internet Explorer with CMS login page.

Login as "admin" with the password you provided during installation or "cmsadmin" and its Active Directory password if an Active Directory is used.

Alternatively you can access the CMS on URL
http:// <CMS server's IP address>:<port>/cms
(Ex: http://server:8080/cms)

And the Course Administration with the booking system can be accessed directly on**
http:// <CMS-Server-Address>
(Ex: http://server)

** Only if default port 80 is used. If another port is used then the address is
http:// <CMS server's IP address>:<port>

How to configure the Learning software:

Some Learning software clients must be configured to be able to communicate with the CMS.

After the CMS server is installed, the URL will be:
http:// <CMS server's IP address>:<port>/cms
(Ex: http://server:8080/cms)

The clients must be configured with this URL. You can find information on how to do this in the Learning software's documentation.

Students and administrators can access the CMS through a web browser from any computer with access to the CMS server.

Using the CMS

Creating or importing users

There are several options to handle users in the CMS depending on your needs

Typing each user in to the CMS
New users can be created from the "Learners" Menu.

Importing users from a spreadsheet
The CMS has functionality to import users from a spreadsheet. this can be done under
Configuration where you can select "Import users from a spread sheet or use the link "Import
Lerners" on the Lerners screen.

Integrating with Active Directory
The CMS now supports integration with an existing company Active Directory. This is a great
option for larger institutions who do not wish to maintain two user databases. You must set up the
CMS to use the Active directory during installation.

Letting users create themselves
You can also elect to have new users create themselves as learners from the Learning software cli-
ents or from the Course Administration website.

NB: This option can be undesirable in some situations since you cannot control who create them-
selves and might end up with a "messy" CMS.

Groups & Profiles

The CMS contains group functionality which can be found under the "Groups" menu. You can cre-
ate two kinds of groups:
  - o Normal groups
    - o These groups are created manually by adding /removing the users
      from the group
  - o Advanced groups
    - o These can be useful for larger installations. They are created
      dynamically by using some key word from the user data. As an
      example you could create a group with all users who have "Copen-
      hagen" as their work place. The group will dynamically be updated if
      people change work place.

Locking groups to profiles

A useful feature in the CMS is the ability to lock profiles to a specific group.

Example:
A site can have several different levels of users: "Nurses year 1", "Nurses year 2" etc. Each level should have access to different procedures in MicroSim. The site has created a corresponding profile for each user level and wants to control which profile each user gets when locking into MicroSim.

How to:
1. Create a group
2. Assign learners to the group
3. In the Groups Menu go to "Profiles"
4. Create a rule to lock the profile by selecting the group and corresponding profile
5. Save & apply the rule

When this is done, then the learner will be assigned the specific profile next time they log into MicroSim.

NB: Be aware that when learners change their profile, then the progress they had under the other profile will not transfer. If they later change the profile back, then the progress will appear again.

Course Administration / Booking system

The CMS contains a Course Administration system which can be used to set up courses with registration / booking, class rooms and instructors.

This functionality can amongst other things help organisations administrate their Resusci Anne Skills Station (with manikins) system and can be found in the "Course Administration" section of the CMS.

Important: You cannot use several different RA Skills Station configuration files for the same Course Administration system.

Setting up the booking system

Setting up skills stations

Before the booking system can be set up and used, the CMS must be configured for the specific organisation. This means that the CMS must be told about the available RA Skills Stations. This can be compared to a meeting room being registered in a centralized room-booking system for later reservations.

The system can handle simple configurations where just a single Skills Station is available, as well as more complex scenarios where several manikins, rooms and PCs are available.

This is an example of the steps needed to install a RA Skills Station in the booking system:
1. Log in to the CMS as the Administrator
2. Go to the "Course Administration" section
3. Go to the "Manage Skills Stations" section
4. Add the desired RA Skills Stations

Once the Skills Station has been added to the system it can be set up and made ready for booking. To do this a course must be created which contains the RA Skills Station session booking.

These are the typical steps involved in setting up a course with booking RA Skills Station sessions:
1. Log in to the CMS as the administrator
2. Go to the Course Administration section
3. Go to the "Courses" section
4. Select "New Course"

This will open up the course creation wizard. Go through the steps in the wizard to create a course

5. In the first step of the wizard you must enter the basic information
6. In the second step of the wizard you can add the sessions for your course. In this case we want to create a booking session where users can sign up for a session themselves.
7. In the third step of the wizard you will add which users should take the course. You can sign up everyone or it might be desired to allow only a subset of the users. When the course setup is complete, all the users added will receive an email telling them to go book a session with the Skills Station.
8. In the fourth step you can add study materials to be used by the course. This is mostly relevant to other types of courses and can be left blank.
9. When the course creation is complete the system will send out notification emails to all the users enrolled.

After the course has been set up it is now available in the system for users to sign up to.

The CMS booking system will have a specific web page that you can make available online or on your Intranet. By default (if the port used is 80) it will be: http://<server address>

Blocking users from being able to sign themselves up

If it is desired to have full control over the users in the CMS and also that new users shouldn't be able to register themselves in the CMS, then do the following:

1. Go to the configuration screen in the Course Administration section
2. Deselect the option to allow users to register

This means that a user can only log into the system if he/she already exists in the CMS.

If an Active Directory is used, then this option is not relevant, since users are managed in the AD only.

Booking system important information:

It is strongly recommended to test the booking system thoroughly after it has been set up, before putting it into production. It is a complex system and might not behave the way you expected it the first time around!

Examples of what can go wrong:

o The system will send out emails to all users who are signed up for a course. This means that it is possible to accidentally send out emails to users who were not intended to receive them or with wrong course information. So make sure the course is correctly configured before signing users up!

o The recer tification period could be set incorrectly. That would mean that users would receive recertification emails at the wrong time.

o The administrator should be aware that not all users have an email address and plan for this. One way to handle this is to have a general email address for these people to use. A person should then monitor this address to see when people are due for recer tification. The system will notify the course creator about this.

Technical Administration of the CMS

Active Directory

This section contains info about what to be aware of if the option to integrate CMS with an AD is chosen.

CMS hotel

It is not possible to use an Internet CMS hosted by Laerdal together with Active Directory.

Preparation

The CMS needs to have a user configured in the AD that it can use to look up the user list. This user needs to be a normal user with normal user rights. The login must be "cmsadmin". During installation of the CMS you will be asked to enter the password of this user.

Selecting the search root

Another thing you will be asked during installation is the search root which the CMS should use when looking up users. It is especially important for larger institutions that a proper search root is used as this can limit the amount of users which will show up in the CMS and make sure that only the relevant users are inserted into the CMS.

Unicode

Using Unicode symbols in the user logins is not supported by Laerdal products. If your AD has users with Unicode symbols in the login, then those users will not work.

Exporting and importing data

The CMS has functionality to export and import CMS data. This can be used if you want to move the CMS to a new server or if you want to move from the CMS hotel to a local server.

NB: Export and import must be done on identical versions of the CMS and be aware that reminders will not be transferred but must be recreated in the new CMS

SMTP Server

The CMS uses an external SMtP server which must be configured during installation.

If you want to change the SMtP server later on, you can do this in the <jboss_home>/config/cms.properties file.

Maintaining and updating the CMS

Backing up the CMS

To back up the CMS you should backup the full CMS installation folder. See how to restore below.

Restore or move the CMS

Important:

When installing the CMS on a new server these two things must be don:

      1. The new CMS must be installed in the same directory as in the old CMS.
         Ex: "C:\ CMS"

I.e. if you back up the directory "C:\CMS\" on "Server A", the files must be copied to the same folder "C:\CMS\" on "Server B"

2. The new CMS must be the same version of the old CMS i.e. make sure that the original version of the CMS is updated to the latest version before moving/restoring.

Steps

1. Install CMS on a fresh server. It must be the same version as the original CMS

2. Stop all the CMS services (this can be done in the Star t Menu):

    Jboss service

    OpenLdap service

    Apache web server

    MySQL

    Mongrel - 3 services

3. Move all the backed up files to the CMS and overwrite any existing files.

4. Star t CMS services again and verify everything works OK.

Log files

The log files can be found here:
<CMS installation folder>\<JBoss-xxx>\server\default\log\
<Course Administration for CMS installation folder>\Rosy\log\
<Course Administration for CMS installation folder>\Apache\logs\
<Course Administration for CMS installation folder>\install.log

If you are reporting problems with the CMS to Laerdal technical support please provide all these files.

Upgrading the CMS

Please check these items before upgrading:

1: Be aware that if you are upgrading from 1.10 or earlier then existing reminders will be removed during the upgrade. this means that you must set up reminders again after the upgrade.

2: You can only upgrade the CMS installation; if you for some reason had the Course Administration module installed on a different server than the main CMS, then you can only keep the CMS settings.

These are the steps to take when upgrading

1) Backup the current CMS installation including the Course Administration module if necessary

2) Stop your existing CMS server (The uninstaller will attempt to stop the jboss and ldap services automatically)

3) Install new version on top of old version. (Your existing CMS data will be automatically backed up to the %temp% folder)

4) After installation is complete you must restar t if prompted.

5) Star t CMS services again and verify that everything works OK.

6) If something goes wrong please contact customer suppor t. Info: http://www.laerdal-sophus.dk

Frequently Asked Questions

We recommend visiting the frequently updated FAQ at www.laerdal-sophus.dk for the latest information.

What is the network impact? In other words, does this product utilize streaming media or other bandwidth intensive technology (does it need Gigabit Ethernet or will 100MB Ethernet work fine)?

Answer: Provided that the LAN was not congested before the CMS installation, then you should not experience any problems. The clients have all the graphical and audio components installed locally and only need to communicate with the CMS to update module progress and the user database.

Will the CMS run on any desktop system that meets your listed specs? Or does it require a full dedicated server with SCSI hard drives etc?

Answer: The CMS component will run on a desktop with the specs. However, the performance is dependent on the number of users logged in at the same time and the number of users over-all.

How well does the CMS play with a multi-function server, such as a file server running a couple of applications already?

Answer: The CMS server with the Course Administration module functions as a LDAP server, JBOSS app server, Apache and MySQL server. It is recommended that this is a standalone server as Storage, Memory and CPU all will be utilized, also since this many services are running, one might run into compatibility issues. The degree of utilization depends on the number of current users as well as the overall user base.

My client will not talk to the CMS.

Answer: On the Learning Software client double click on the red icon in the right corner, which says Update Agent. Under settings, make sure that the URL to the CMS is correct. Go to prog- ress and press "Restart". The Bars should move to 100%. If not, try to type the URL for the CMS into a browser window. A login page for the CMS should appear. If not, then it might be a network issue.

Where can I get support?

Answer: A phone number to your local tech support can be found on the Learning software product box. The support website can be found at: http://www.laerdal-sophus.dk.

Other problems/how do I speed the support process?

If you encounter problems not mentioned here, then you can speed up the support process by supplying as much information as possible about the setup and the CMS log files. See the log files' location in the "Log files" section above.

Emails are not sending

If you are experiencing problems with emails not sending then check these items:
- *The SMTP settings are correct (see smtp section above)*
- *Nothing is blocking the CMS from contacting the SMTP server*
- *The SMTP server allows emails to be sent to the recipients*
- *The SMTP server allows emails to be sent from the email address specified during installation*

Active Directory useful information

- *Make sure that the user "cmsadmin" in the AD's password does not expire.*
- *The "cmsadmin" user must be placed under the search root and in the same group as the other users.*
- *The CMS only supports one group in the "cn" field. If several groups are needed then a super group must be created and the other groups must be added to this group.*
- *Group is not a mandatory field*
- *All the users must be located under the search root. It is not enough that they are in the group*
- *If using Kerberos, then the server used for CMS, must be on the same domain as the AD it is connecting to.*
- *The clock on the CMS server and the AD must be in synch*
- *Groups are case sensitive*
- *To change AD settings, then edit this file \CMS\JBoss-3.2.7\config\config.xml and restart JBoss Service*

We recommed this tool to find out what search root needed:
http://ldapadmin.sourceforge.net/
After connecting to the AD you can right click on the Path needed and select to copy the path

SP2106 rev D

Network Guide

SP2106 rev D